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**THE FOLLOWING ARE THE ENGLISH TRANSLATION
OF ANNEXES TO THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT (ARTICLE 34):**

Amended Sheets (Pages 12, 13, 14, 14-a, and 14-b)

REPLACED BY
ART 34 AMB

We claim:

- 5 1. A process for preparing 3-cyano-3,5,5-trimethylcyclohexanone (isophoronenitrile) by reacting isophorone with hydrogen cyanide in the presence of a base as a catalyst to obtain a crude isophoronenitrile product, and subsequently distilling the crude isophoronenitrile product, which comprises adding, before a distillation, at least one sulfonic acid or carboxylic acid selected from the group consisting of



where R is a linear or branched C₁- to C₂₄-alkyl radical which may optionally be substituted by -CO₂R' where R' is hydrogen or an alkyl radical, or by a phosphonic acid group, a phenyl radical substituted by linear or branched C₂- to C₂₄-alkyl radicals, nitro, sulfo or hydroxyl groups; or a substituted or unsubstituted fused aromatic radical; aliphatic polysulfonic acids; condensates of naphthalene- or phenolsulfonic acids, aliphatic polycarboxylic acids; and



where R'' is a linear or branched C₂- to C₂₄-alkyl radical which may optionally be substituted by one or more phosphonic acid groups; a phenyl radical which is unsubstituted or substituted by linear or branched C₁- to C₂₄-alkyl groups, nitro, sulfo or hydroxyl groups; or an unsubstituted or substituted fused aromatic radical.

2. A process as claimed in claim 1, wherein the carboxylic acid or sulfonic acid is added in an amount of 1 acid equivalent, based on 1 base equivalent of the base used as the catalyst.
3. A process as claimed in claim 1 or 2, wherein the catalyst is selected from the group consisting of alkali metal and alkaline earth metal carbonates, alkali metal and alkaline earth metal alkoxides, oxides, hydroxides and cyanides, tertiary amines and quaternary phosphonium and ammonium bases.
4. A process as claimed in any of claims 1 to 3, wherein the base used as the catalyst is used in an amount of from 0.01 to 20% by weight, based on the isophorone used.

5. A process as claimed in any of claims 1 to 4, wherein the reaction is carried out at temperatures of from 80 to 220°C, preferably from 120 to 200°C, more preferably from 150 to 200°C.

6. A process as claimed in any of claims 1 to 5, wherein the reaction is carried out at a pressure of from 1 to 5 bar, preferably from 1 to 3 bar.

7. A process as claimed in any of claims 1 to 6, wherein the distillation is carried out in a rectification column.

8. A process as claimed in any of claims 1 to 7, wherein the reaction, the addition of the sulfonic acid or carboxylic acid and the subsequent distillation are carried out continuously.

9. A process for preparing 3-cyano-3,5,5-trimethylcyclohexanes (isophoronenitrile) comprising the following steps:

a) isophoronenitrile synthesis by reaction of isophorone with hydrogen cyanide in the presence of a base as a catalyst to obtain a crude isophoronenitrile product,

b) neutralization of the reaction mixture obtained in step a) with a sulfonic acid or carboxylic acid selected from the group consisting of



where R is a linear or branched C₁- to C₂₄-alkyl radical which may optionally be substituted by -CO₂R' where R' is hydrogen or an alkyl radical, or by one or more phosphonic acid groups, a phenyl radical substituted by linear or branched C₂- to C₂₄-alkyl radicals, nitro, sulfo or hydroxyl groups; or a substituted or unsubstituted fused aromatic radical; aliphatic polysulfonic acids; condensates of naphthalene- or phenolsulfonic acids, aliphatic polycarboxylic acids; and



where R'' is a linear or branched C₂- to C₂₄-alkyl radical which may optionally be substituted by one or more phosphonic acid groups; a phenyl radical which

is substituted by linear or branched C₁- to C₂₄-alkyl groups, nitro, sulfo or hydroxyl groups; or an unsubstituted or substituted fused aromatic radical,

c) distillation of the reaction mixture obtained in step b).

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10. The use of a sulfonic acid or carboxylic acid as claimed in claim 1 as a neutralizing agent before the distillation of a crude isophoronenitrile product which has been obtained by reacting isophorone with hydrogen cyanide in the presence of a base as a catalyst, in order to avoid precipitates in the neutralization of the base used as the catalyst with an acid.

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